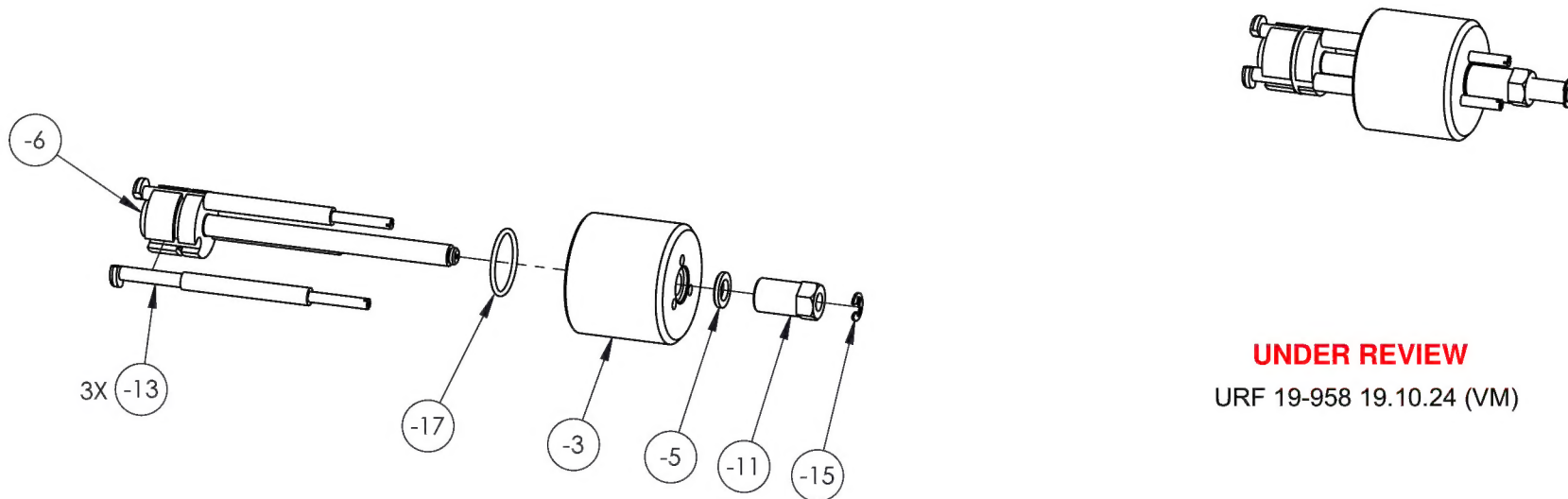


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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0008	UPDATED TO NEW STANDARDS. CH'D T/N FORMAT WAS RBE105-317371-W1 IS RBE105-317371W1. -3, -7, -9, -11, -13 CH'D FINISH WAS NICKEL PLATE IS ZINC PLATE ASTM B633 TYPE I SC2. -3 ADDED .03 X 45° CHAMFER. -5 CH'D DIMS WAS Ø.473 IS Ø.473-.478. WAS .116 IS .116±.010. ADDED .03 X 45° CHAMFER. -7 CH'D DIM WAS .201 IS 3X .305-.310. ADDED DIM 3X FULL R. MOVED CHAMFER TO OPPOSITE END. -9 CH'D DIM WAS Ø.320 IS Ø.311-.315. DELETED DIM 5.874. ADDED DIM 1.201. ADDED CENTER CALLOUT. -11 ADDED DIM .06 X 45°. -13 CH'D DIMS WAS Ø.944 IS Ø.630. WAS .217 IS .181. WAS Ø.192 IS Ø.302. WAS .045 IS .08 WAS 2X .138 IS 2X .05. -17 ADDED TO BOM. CH'D TOLERANCE ON NON-CRITICAL DIMENSIONS.	2/1/2016	DPD	JAG
3	17-0026	CH'D TITLE WAS TAIL ROTOR EXTRACTOR IS EXTRACTOR. ADDED USED ON MODEL EC645. -3 CH'D DIM WAS Ø.480 THRU ALL [ ] Ø.7870/.7865 [ ] P.F. -5 IS Ø.480 THRU ALL [ ] Ø.7870/.7865 [ ] P.F. -5. -5 CH'D DIM WAS Ø.7877/.7872 P.F. -3 IS Ø.7877/.7872 (P.F. -3). -6 ADDED SUB ASSEMBLY. -7 CH'D DIM WAS Ø.4998/.4993 THRU ALL IS Ø.4997-.4993 THRU ALL (P.F. -9). REMOVED FINISH. -9 CH'D DIM WAS Ø.5005/.5000 IS Ø.5005/.5000 (P.F. -7); REMOVED FINISH. -13 ADDED NOTE "CENTERS OK".	1/26/2017	SM	JAG



**UNDER REVIEW**

URF 19-958 19.10.24 (VM)

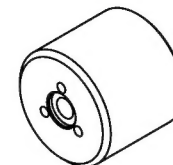
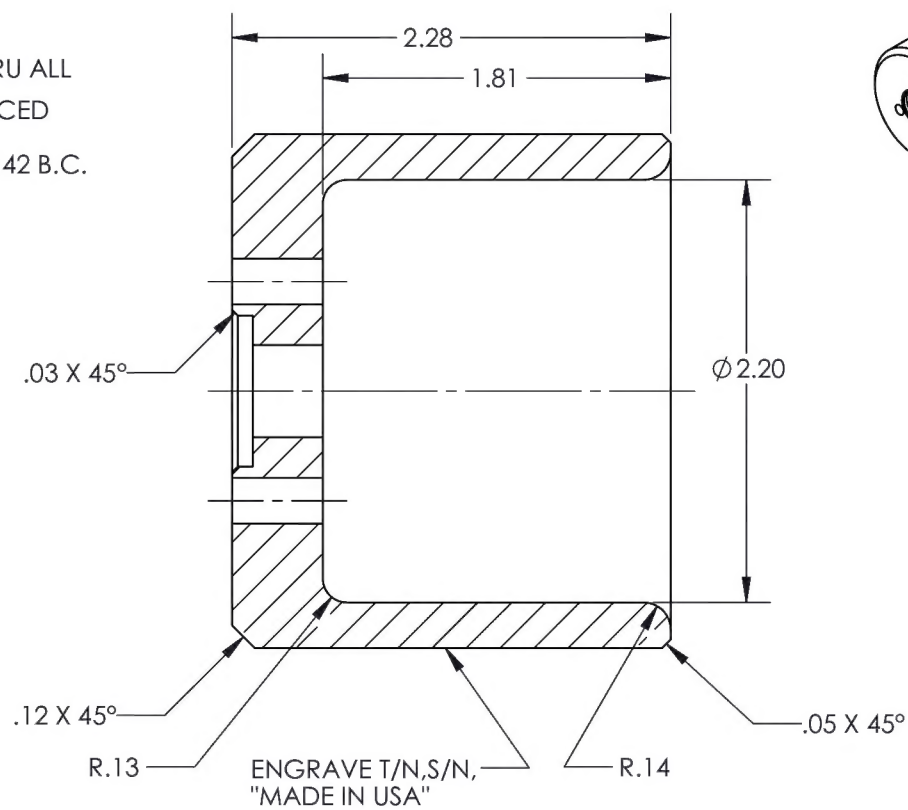
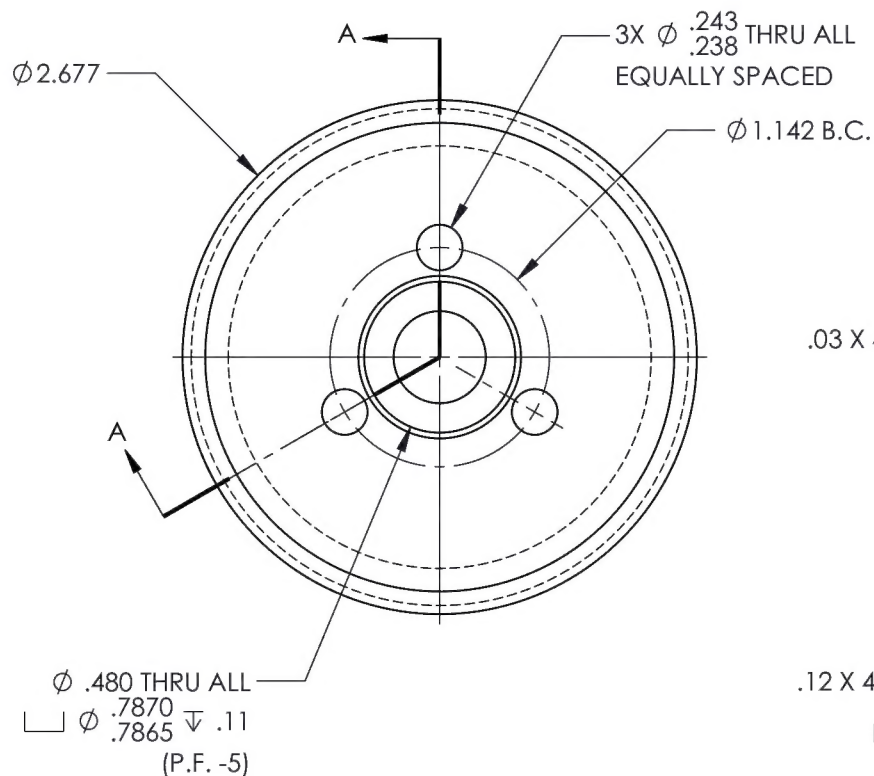
NOTE:  
REF. EUROCOPTER T/N: 105-317371W1.

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
			-3	1	HOUSING	4140/4142		2
			-5	1	INSERT	BRASS		3
	X		-6	1	HUB ASSEMBLY			4
	1		-7		HUB	4140/4142		5
	1		-9		BOLT	4140/4142		6
			-11	1	COUPLING NUT	4140/4142		7
			-13	3	PIN	4140/4142		8
		B/O	-15	1	RETAINING RING	STEEL	Ø9mm - 12mm (MCMASTER-CARR #98543A116)	1
		B/O	-17	1	O-RING	BUNA-N	Ø.103 X Ø1.299 I.D. X Ø1.505 O.D. (MCMASTER-CARR #9452K89)	1
	ASSY -6							

DART AEROSPACE		
TITLE EXTRACTOR		
DWG NO. RBE105-317371W1	REV 3	
MAT'L REPT TREAT FINISH SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125°	
DRAWN BY: CHECKED: OPPS APPR: QA APPR: APPROVED:	CLOUGH CLOUGH ANDERSON LINDSAY GILBERT	
SCALE 1:4	DATE 7/15/2010	SHEET 1 OF 9

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0008	-3 CH'D FINISH WAS NICKEL PLATE IS ZINC PLATE ASTM B633 TYPE I SC2. ADDED .03 X 45° CHAMFER.	2/1/2016	DPD	JAG
3	17-0026	-3 CH'D DIM WAS Ø.480 THRU ALL $\square$ Ø.7870/.7865 $\nabla$ .11 P.F. -5 IS Ø.480 THRU ALL $\square$ Ø.7870/.7865 $\nabla$ .11 (P.F. -5).	1/26/2017	SM	JAG



SECTION A-A

**UNDER REVIEW**

URF 19-958 19.10.24 (VM)

③  
HOUSING

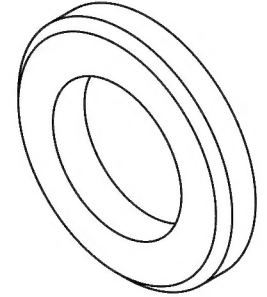
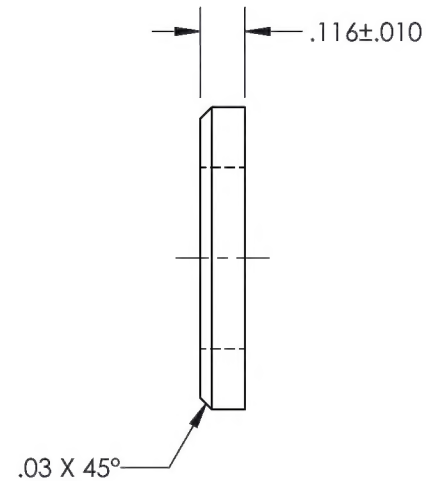
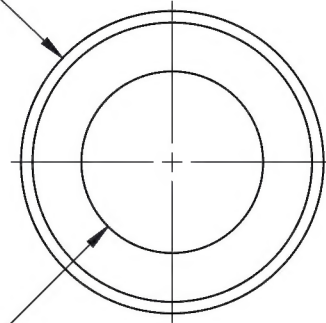
<b>DART AEROSPACE</b>	
TITLE <b>EXTRACTOR</b>	
DWG NO. <b>RBE105-317371W1-3</b>	REV <b>3</b>
MAT'L 4140/4142 HEAT RC 32-36 TREAT FINISH ZINC PLATE SPEC ASTM B633 TYPE I SC 2	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± .5° .X ± .1 SURFACES = 125° 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
DRAWN BY: CLOUGH	USED ON MODEL
CHECKED: CLOUGH	EC145, EC645
OPPS APPR: ANDERSON	
QA APPR: LINDSAY	
APPROVED: GILBERT	
SCALE 1:1	DATE 7/15/2010
SHEET 2 OF 9	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0008	-5 CH'D DIMS WAS Ø.473 IS Ø.473-.478, WAS .116 IS .116±.010. ADDED .03 X 45° CHAMFER.	2/1/2016	DPD	JAG
3	17-0026	-5 CH'D DIM WAS Ø.7877/.7872 P.F. -3 IS Ø.7877/.7872 (P.F. -3).	1/26/2017	SM	JAG

Ø.7877  
Ø.7872  
(P.F. -3)

Ø.478  
Ø.473



**UNDER REVIEW**

URF 19-958 19.10.24 (VM)

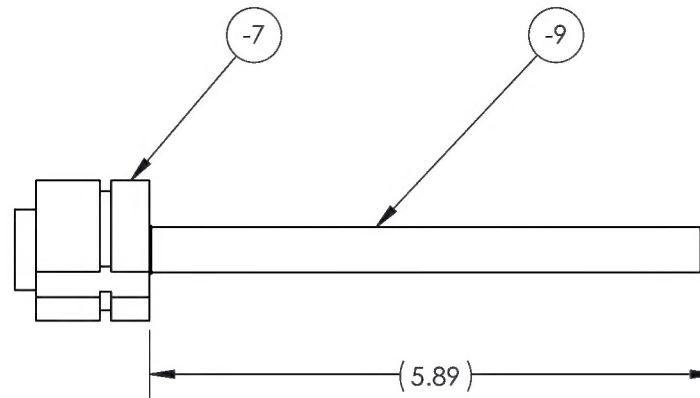
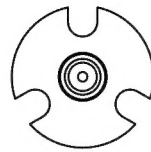
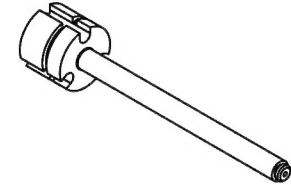
(-5)

INSERT

<b>DART AEROSPACE</b>	
TITLE <b>EXTRACTOR</b>	
DWG NO. <b>RBE105-317371W1-5</b>	REV <b>3</b>
MAT'L BRASS	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± .5°
	.X ± .1 SURFACES = 125°
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES
CHECKED: CLOUGH	.015 x 45° OR .015R
OPPS APPR: ANDERSON	2. DIMENSIONAL LIMITS APPLY
QA APPR: LINDSAY	AFTER PLATING
APPROVED: GILBERT	3. INTERPRET DIM AND TOL PER
	ASME Y14.5M-2009
	USED ON MODEL
	EC145, EC645
SCALE 2:1	DATE 7/15/2010
	SHEET 3 OF 9

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3	17-0026	•6 ADDED SUB ASSEMBLY.	1/26/2017	SM	JAG



**UNDER REVIEW**

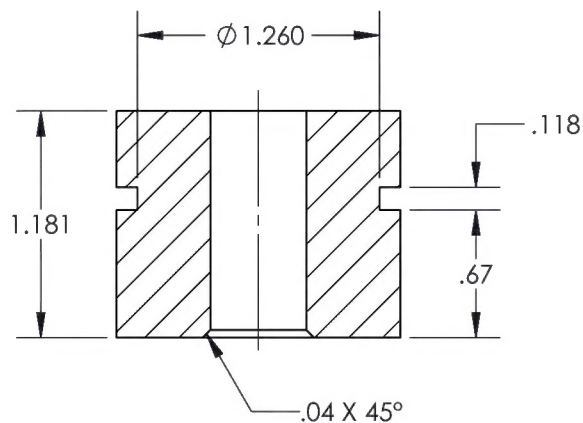
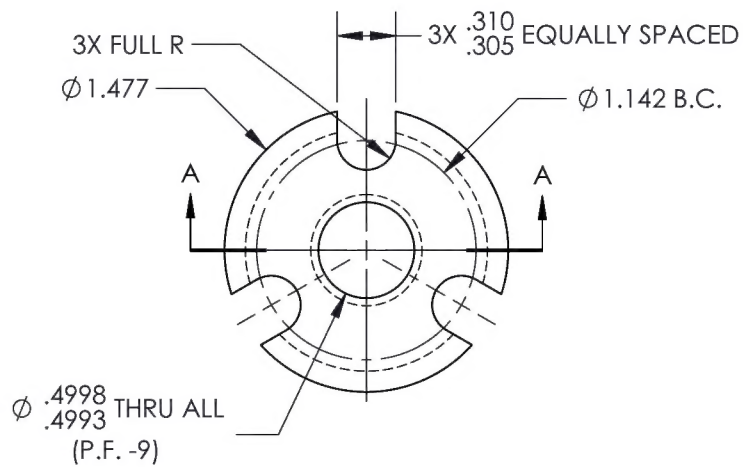
URF 19-958 19.10.24 (VM)

(-6)  
HUB ASSEMBLY

<b>DART AEROSPACE</b>	
TITLE <b>EXTRACTOR</b>	
DWG NO. <b>RBE105-317371W1-6</b>	REV <b>3</b>
MAT'L <b>ZINC PLATE</b>	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT <b>ZINC PLATE</b>	.XXX ± .005 FRACTIONS ± 1/8
FINISH <b>ZINC PLATE</b>	.XX ± .01 ANGLES ± 5°
SPEC <b>ASTM B633 TYPE I SC 2</b>	.X ± .1 SURFACES = 125✓
DRAWN BY: <b>MACKOVJAK</b>	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: <b>CLOUGH</b>	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: <b>ANDERSON</b>	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: <b>LINDSAY</b>	USED ON MODEL
APPROVED: <b>GILBERT</b>	<b>EC145, EC645</b>
SCALE <b>1:2</b>	DATE <b>1/26/2016</b>
SHEET 4 OF 9	

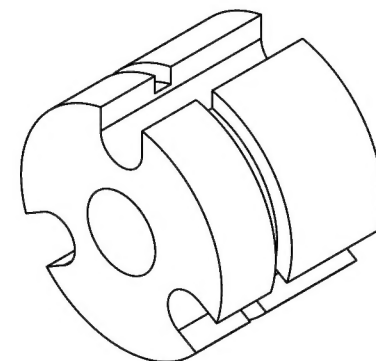
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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0008	-7 CH'D DIM WAS .201 IS 3X .305-.310. ADDED DIM 3X FULL R. MOVED CHAMFER TO OPPOSITE END. CH'D FINISH WAS NICKEL PLATE IS ZINC PLATE ASTM B633 TYPE I SC2.	2/1/2016	DPD	JAG
3	17-0026	-7 CH'D DIM WAS Ø.4998/.4993 THRU ALL IS Ø.4997-.4993 THRU ALL (P.F. -9), REMOVED FINISH.	1/26/2017	SM	JAG



SECTION A-A

⑦  
HUB



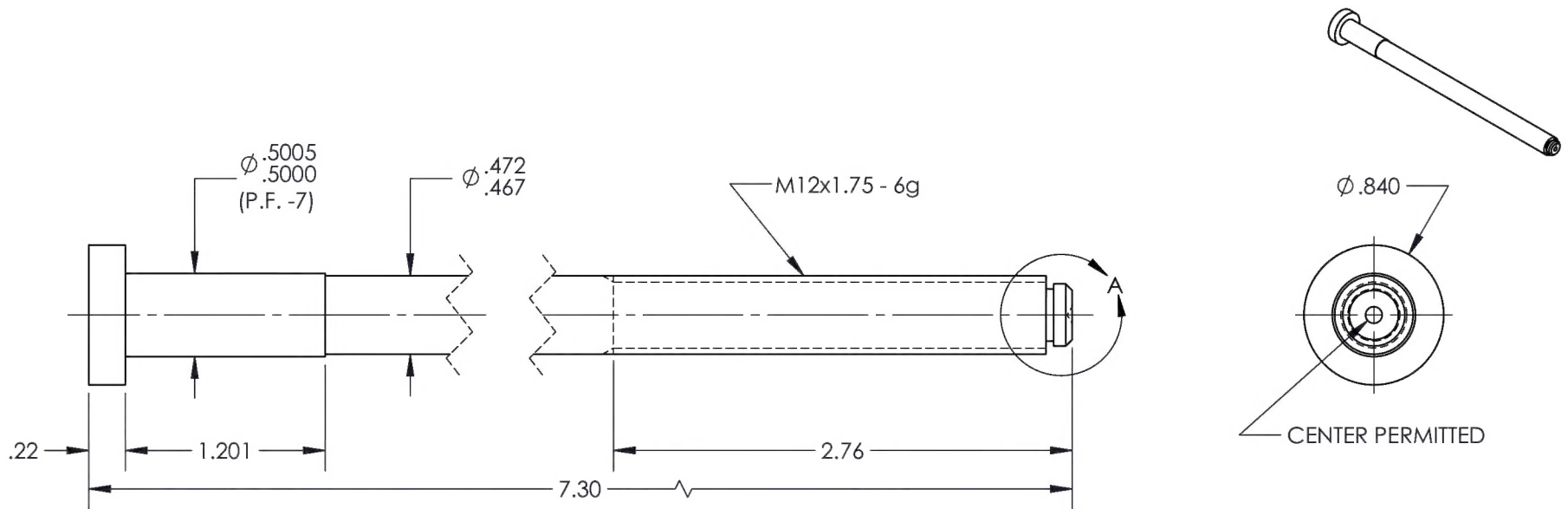
**UNDER REVIEW**

URF 19-958 19.10.24 (VM)

<b>DART AEROSPACE</b>	
TITLE <b>EXTRACTOR</b>	
DWG NO. <b>RBE105-317371W1-7</b>	REV <b>3</b>
MAT'L 4140/4142 TREAT RC 28-32 FINISH SEE -6	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± .5° .X ± .1 SURFACES = 125°
SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
CHECKED: CLOUGH	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
OPPS APPR: ANDERSON	USED ON MODEL
QA APPR: LINDSAY	EC145, EC645
APPROVED: GILBERT	
SCALE 1:1	DATE 7/15/2010
SHEET 5 OF 9	

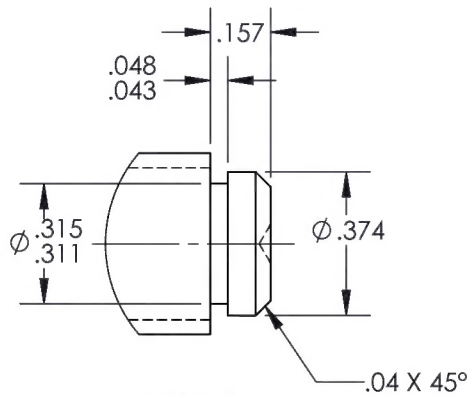
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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0008	-9 CH'D DIM WAS Ø.320 IS Ø.311-.315, DELETED DIM 5.874. ADDED DIM 1.201. ADDED CENTER CALLOUT. CH'D FINISH WAS NICKEL PLATE IS ZINC PLATE ASTM B633 TYPE I SC2.	2/1/2016	DPD	JAG
3		-9 CH'D DIM WAS Ø.5005/.5000 IS Ø.5005/.5000 (P.F. -7); REMOVED FINISH.	1/26/2017	SM	JAG



**UNDER REVIEW**

URF 19-958 19.10.24 (VM)



DETAIL A  
SCALE 2 : 1

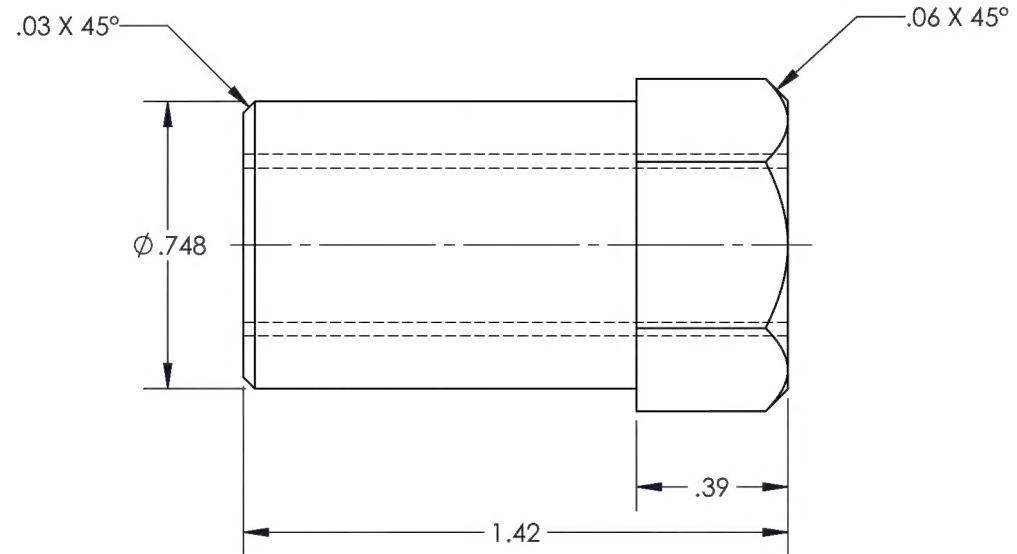
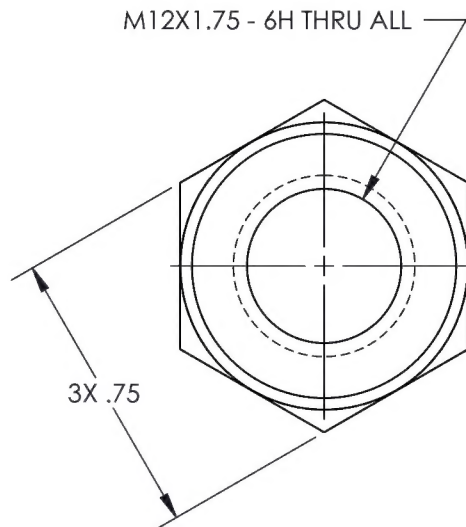
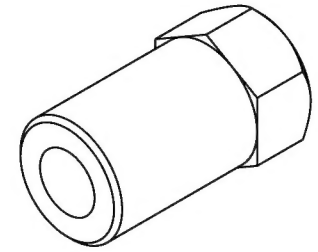
⑨  
BOLT

<b>DART AEROSPACE</b>	
TITLE <b>EXTRACTOR</b>	
DWG NO. <b>RBE105-317371W1-9</b>	REV <b>3</b>
MAT'L 4140/4142 HEAT RC 28-32 TREAT FINISH SEE -6 SPEC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125 ✓
DRAWN BY: <b>CLOUGH</b>	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: <b>CLOUGH</b>	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: <b>ANDERSON</b>	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: <b>LINDSAY</b>	USED ON MODEL
APPROVED: <b>GILBERT</b>	<b>EC145, EC645</b>
SCALE 1:1	DATE 7/15/2010
SHEET 6 OF 9	



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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0008	-11 ADDED DIM .06 X 45°. CH'D FINISH WAS NICKEL PLATE IS ZINC PLATE ASTM B633 TYPE I SC2.	2/1/2016	DPD	JAG



**UNDER REVIEW**

URF 19-958 19.10.24 (VM)

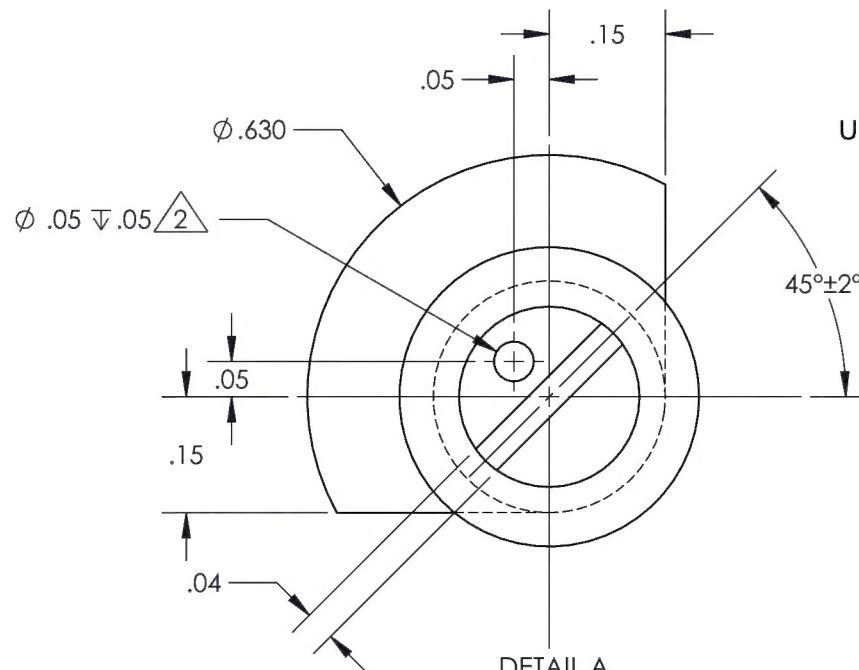
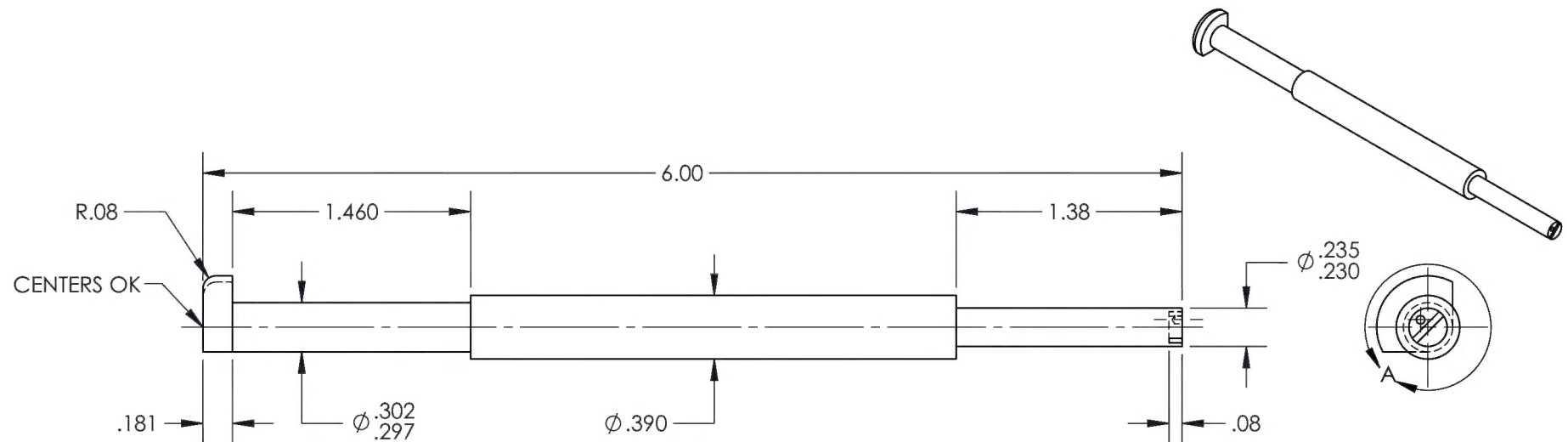
(-11)

COUPLING NUT

<b>DART AEROSPACE</b>	
TITLE <b>EXTRACTOR</b>	
DWG NO. <b>RBE105-317371W1-11</b>	REV <b>3</b>
MAT'L 4140/4142	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT RC 28-32	.XXX ± .005 FRACTIONS ± 1/8
FINISH ZINC PLATE	.XX ± .01 ANGLES ± .5°
SPEC ASTM B633 TYPE I SC 2	.X ± .1 SURFACES = 125
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	EC145, EC645
SCALE 2:1	DATE 7/15/2010
SHEET 7 OF 9	

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REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
2	16-0008	-13 CH'D DIMS WAS Ø.944 IS Ø.630, WAS .217 IS .181, WAS Ø.192 IS Ø.302, WAS .045 IS .08 WAS 2X .138 IS 2X .05. CH'D FINISH WAS NICKEL PLATE IS ZINC PLATE ASTM B633 TYPE I SC2.	2/1/2016	DPD	JAG
3	17-0026	-13 ADDED NOTE "CENTERS OK".	1/26/2017	SM	JAG



DETAIL A  
SCALE 4 : 1

(-13)

PIN

**UNDER REVIEW**

URF 19-958 19.10.24 (VM)

NOTE:

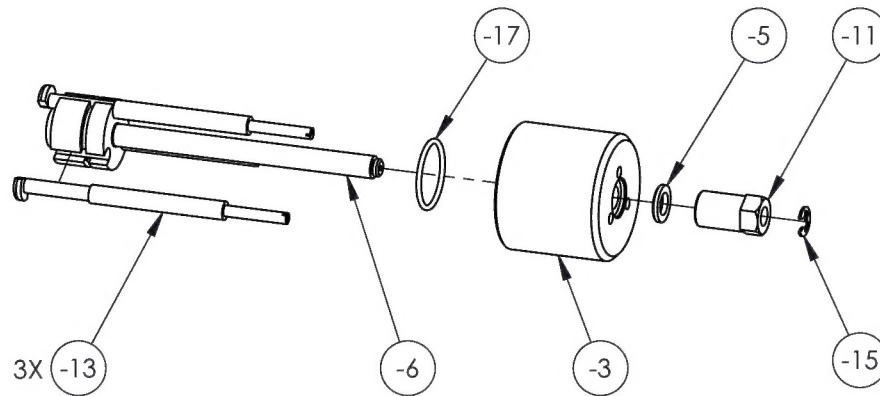
1. ORIENTATION OF DRIVE SLOT AND INDICATOR IS CRITICAL.

2. FILL WITH RED PAINT.

<b>DART AEROSPACE</b>	
TITLE <b>EXTRACTOR</b>	
DWG NO. <b>RBE105-317371W1-13</b>	REV <b>3</b>
MAT'L 4140/4142 HEAT TREAT RC 34-38 FINISH ZINC PLATE SPEC ASTM B633 TYPE I SC 2	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .005 FRACTIONS ± 1/8 .XX ± .01 ANGLES ± 5° .X ± .1 SURFACES = 125 ✓	
1. BREAK ALL SHARP EDGES .015 x 45° OR .015R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY: <b>CLOUGH</b>	USED ON MODEL
CHECKED: <b>CLOUGH</b>	EC145, EC645
OPPS APPR: <b>ANDERSON</b>	
QA APPR: <b>LINDSAY</b>	
APPROVED: <b>GILBERT</b>	
SCALE 1:1	DATE 7/15/2010
SHEET 8 OF 9	



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**UNDER REVIEW**

URF 19-958 19.10.24 (VM)

Part #	UNIT QTY	Description	Material
-3	1	HOUSING	4140/4142
-5	1	INSERT	BRASS
-6	1	HUB ASSEMBLY	
-11	1	COUPLING NUT	4140/4142
-13	3	PIN	4140/4142
-15	1	RETAINING RING	STEEL
-17	1	O-RING	BUNA-N

**DART**  
AEROSPACE

190 S. Danebo Ave., Eugene, OR. 97402

1-800-556-4166

e-mail: sales@dartaero.com

dartaerospace.com

TITLE

EXTRACTOR

DWG NO.

RBE105-317371W1

REV

3

CUSTOMER 1 OF 1

SCALE

1:4

DATE

7/15/2010

SHEET

9 OF 9